



July 7, 2015

BY ELECTRONIC FILING

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th St, S.W.
Washington, D.C. 20554

Re: NOTICE OF EX PARTE
GN Docket No. 14-177: *Use of Spectrum Bands Above 24 GHz For Mobile Radio Services*;

Dear Ms. Dortch,

On July 7, 2016, Competitive Carriers Association (“CCA”)¹ and several of its members representing nationwide, regional and rural carrier interests met with Johanna Thomas, Legal Advisor to Federal Communications Commission (“FCC” or “Commission”) Commissioner Rosenworcel, Wireless, International and Public Safety, and Erin McGrath, Legal Advisor to Commissioner O’Rielly, Wireless, Public Safety, and International. A full list of attendees is included below. During the meeting, CCA and its members discussed the forthcoming Report & Order and Further Notice of Proposed Rulemaking in the above-referenced *Spectrum Frontiers* proceeding.² CCA noted that it is generally pleased with the Chairman’s proposal to free up more spectrum for 5G deployments and to allow the technology to drive the FCC’s policy.³ Nevertheless, CCA and its members discussed modifications outlined below that will foster rapid and more innovative 5G deployments in urban, suburban and rural areas alike.

¹ CCA is the nation’s leading association for competitive wireless providers and stakeholders across the United States. CCA’s membership includes nearly 100 competitive wireless providers ranging from small, rural carriers serving fewer than 5,000 customers to regional and national providers serving millions of customers. CCA also represents approximately 200 associate members including vendors and suppliers that provide products and services throughout the mobile communications supply chain. Additional spectrum opportunities are critical to developing and deploying new technologies for all CCA members within the wireless ecosystem.

² See FCC, “Fact Sheet: Spectrum Frontiers Proposal to Identify, Open Up Vast Amounts of New High-Band Spectrum for Next Generation (5G) Wireless Broadband” (rel. June 23, 2016), *available at* http://transition.fcc.gov/Daily_Releases/Daily_Business/2016/db0623/DOC-339990A1.pdf (“*Spectrum Frontiers* Fact Sheet”).

³ See Remarks of FCC Chairman Tom Wheeler, “The Future of Wireless: A Vision for U.S. Leadership in a 5G World,” National Press Club (June 20, 2016), *available at* http://transition.fcc.gov/Daily_Releases/Daily_Business/2016/db0620/DOC-339920A1.pdf.

A. Aggregation

CCA first praised the Commission's plans to establish an *ex ante* spectrum holdings limit of 1250 MHz for auctioned spectrum and a 1250 megahertz limit for case-by-case review of secondary market transactions in all millimeter wave ("mmW") bands. While the 1250 megahertz limit of all mmW spectrum is helpful, CCA reiterated its support for a two-tiered approach for evaluating mmW spectrum aggregation.⁴ Specifically, CCA urged the Commission to implement: (1) a one-third screen for all licensed mmW spectrum; and (2) a one-half screen for licensed spectrum in a particular band, like 28 GHz. CCA encourages the FCC to employ this two-tiered approach with respect to secondary market transactions and as an *ex ante* spectrum auction policy mechanism.⁵

The Commission must establish clear, comprehensive aggregation limits for licensed mmW spectrum that will actually prevent anticompetitive practices by the largest carriers who are positioned to be among the first to develop technologies for these higher-frequency bands, and who are already attempting to aggregate unique high-band spectrum to the detriment of competition and consumers. Establishing a screen or limit for all the mmW spectrum reduces the overall effectiveness of the limit.

In addition, CCA sought clarity on whether the 1250 megahertz screen is based on one-third of the spectrum to be licensed in the 28, 37 and 39 GHz bands. To the extent that the 37-37.6 GHz band is "licensed-by-rule," CCA reiterated that it should not be included in determining a one-third spectrum screen. Excluding this spectrum would bring the screen to approximately 1100 megahertz. Additionally, without a per-band spectrum limit, one carrier could aggregate all 850 MHz of the 28 GHz band, for example. The Commission should ensure that any preventative measures are not diluted by unlicensed and licensed-by-rule spectrum as included in the screen. If the Commission does not adopt CCA's two-tiered approach, therefore, CCA encouraged the Commission to explain how any proposed rules will account for harmful aggregation within a single band.

Likewise, T-Mobile, USA ("T-Mobile") and C Spire reiterated that splitting these 850 MHz blocks risks reducing equipment availability for competitive operators. Because the technical ramifications of such an approach are unknown, the Commission should address this issue in the Further Notice of Proposed Rulemaking to further explore the technical consequences associated with a bifurcated approach for this valuable spectrum.

B. License Size

CCA also praised the Commission for its adoption of smaller geographic license sizes for auction spectrum in this proceeding. CCA strongly supports the use of smaller geographic license sizes, especially for newly auctioned spectrum, so rural and regional carriers have an opportunity to bid on their existing geographic market territory without being forced to compete and expend unnecessary and often limited resources for the more urban portions of their markets. Nevertheless,

⁴ See *Ex Parte* Letter from Rebecca Murphy Thompson, EVP & General Counsel, CCA, to Marlene H. Dortch, Secretary, FCC, GN Docket No. 14-177 (filed June 15, 2016).

⁵ See *Applications Filed for the Transfer of Control of XO Communications, LLC to Verizon Communications Inc., Pleading Cycle Established*, Public Notice, DA 16-393, WC Docket No. 16-70 (2016) ("Verizon-XO Transaction").

CCA objects to the Commission's proposal to change incumbent local multipoint distribution service ("LMDS") spectrum license sizes from Basic Trading Areas ("BTAs") to counties. In this instance, the Commission's proposed change to county license areas would harm incumbent licensees, especially small and rural carrier licensees.

Many incumbents facing increased buildout requirements would likely fail to comply and thus would lose their licenses. While the contemplated performance requirements themselves are not particularly onerous in isolation, the cost of buildout requirements for each "new" county-based license within the existing licensed BTA would greatly multiply the expense of holding LMDS licensees.⁶ Specifically, rural carriers hold licenses in sparsely populated areas. As an example, Central Texas Telephone Cooperative, Inc. ("CTTC") explained that it currently serves 19 counties within its two BTA licenses, and being forced to buildout networks in each of those 19 counties is untenable given technological and practical constraints. Some of CTTC's counties are completely rural and sparsely populated. In fact, CTTC's territory spans 3,200 square miles with less than 2 customers per square mile, and therefore it does not make sense to install points of presence ("POPs") or links per the proposed buildout requirements. Carriers should not be forced to deploy needless infrastructure to keep their licenses when they have already invested financial and human resources deploying and meeting its expected buildout requirement.

Further, CCA explained that the Commission should not assume a relatively "empty" county justifies taking that license away from its incumbent holder; rural areas may not always remain sparsely populated, and agricultural or industrial use could invigorate spectrum utilization. Reducing the size of the license reduces its value, and carriers should not be deprived of a valuable asset for which they have already paid.

Making matters worse, "splitting" the LMDS blocks would exhaust the resources of incumbent carriers. Indeed, CTTC and C Spire noted that the proposed new license sizes do not make sense from a technological perspective. Breaking up the A1 band into separate licenses or separating the A1 and A2 bands will eliminate existing deployment scenarios. Multipoint downlink operations in the A1 band would likely cause interference where new licensees' A1 downlinks are co-channel with legacy A1 uplinks, leading to an inefficient use of spectrum and the need to create a new generation of point-to-multipoint equipment. Splitting the A1 band into multiple parts would strand incumbent licensees' current deployments and may require completely new deployment in (at least) one half of the band. Similarly, a failure to timely allocate the A2, A3 and B bands for next-generation mobile broadband services will, at best, result in operators needing to senselessly reinvest in new equipment at a later date that includes this 450 megahertz of spectrum—if the Commission's delay does not result in these bands being left out of the 5G ecosystem entirely. Even if a rural carrier wanted to deploy a mobile network in a rural, flat county on LMDS spectrum, the necessary technology simply does not exist given LMDS spectrum's limited propagation capabilities. While, nationwide carriers may use LMDS spectrum for terrestrial mobile uses, rural and regional users likely will continue to use LMDS for backhaul and point-to-point services for some time. Dramatically changing the character of existing LMDS licenses, therefore, would result in sunk costs for carriers who have already invested in network technology and may result in decreased coverage for rural areas.

⁶ See *Ex Parte* Letter from D. Cary Mitchell & John A. Prendergast, Counsel to the Blooston Rural Carriers, Blooston, Mordkofsky, Dickens, Duffy & Prendergast, LLP, Counsel to the Blooston Rural Carriers, to Marlene H. Dortch, Secretary, FCC, GN Docket No. 14-177 et al. (filed June 17, 2016).

CCA supports the Commission's goals of driving new technologies, but in the case of incumbent LMDS licenses, shrinking the license size is not the correct policy. C Spire noted that it is exploring new equipment and plans to begin testing new technologies within the next few months in the mmW spectrum based on its current license parameters. Changing the license size now would put competitive carriers like C Spire in the position of having to decide between stranding their investment or keeping their license at an unreasonable cost. These carriers went to significant expense to construct their LMDS licenses, even when others were forced to return their licenses because of the lack of economically available equipment. This sort of change will deter 5G deployments in rural America.

Rather, CCA encouraged the Commission to reward carriers for their investment. To that end, CCA urged the Commission not to change the geographic license size for incumbent LMDS licensees. If, however, the FCC feels compelled to make a change, CCA proposed a few potential alternatives, including the use of county-sized licenses for all LMDS licensees while allowing incumbent licensees to meet any new performance benchmarks in one county in its originally-licensed BTA for purposes of renewal; or exempting incumbent LMDS licensees from changing to counties. Another alternative is to convert BTA licenses to Partial Economic Areas ("PEAs") where a licensee holds a BTA license or licenses that cover an entire PEA, and to partition PEAs where a licensee holds a BTA license or licenses that cover only part of a PEA.⁷ This proposal has the advantage of aligning the geographic licensing of 28 GHz with the licensing schemes in other 5G bands, including 37 GHz, 39 GHz and 600 MHz.⁸ As a result of significant confusion about the actual and potential technical uses for this spectrum, CCA suggested that the Commission include the question about the appropriate geographic license size for LMDS in its Further Notice to develop a better record and for all interested parties to better understand how LMDS is being used today and will be used in a 5G world, especially in rural America.

Regardless, the Commission should not inflict the described harms on incumbent licensees without a plan to make those licensees whole. If it makes any changes to incumbent LMDS licenses, the FCC must provide additional relief to incumbent licensees including a ten-year glide path beyond the currently proposed three to five years, for carriers to shift from BTA to county license sizes. A significantly longer glide path towards county or PEA sized licenses will allow incumbents to recoup their sunk costs and revise their business plans. Certainty is needed to encourage investment in higher spectrum bands, particularly where a vast majority of the spectrum will require research and development of new technology to fully implement the bands.

C. Sharing the 37-37.6 Band

The Commission will severely devalue the 37-37.6 GHz band if it is used by "dynamic shared access between different commercial users, and commercial and federal users."⁹ The 37 GHz spectrum is the crown jewel of this proceeding because it represents greenfield opportunity. While

⁷ See *Ex Parte* Letter from Michele Farquhar, Partner, Hogan Lovells, Counsel to Nextlink Wireless, LLC and XO Communications, LLC, to Marlene H. Dortch, Secretary, FCC, GN Docket No. 14-177 *et al.* (filed June 30, 2016).

⁸ See *id.*

⁹ See *Spectrum Frontiers* Fact Sheet at 1.

all but a modest amount of the 28 and 39 GHz bands are already licensed, the 37 GHz band is not and is the only spectrum that could be fully auctioned for new services. CCA reiterated that this spectrum should be licensed for commercial use to achieve the greatest financial and technological value. At the very least, the Commission should not require two commercial parties to share, and should only subject licensees to sharing arrangements between commercial and federal users. CCA asked the Commission to take into account past successes with respect to mobile carriers coordinating with federal users in the AWS-1 spectrum and current successful efforts to coordinate use of AWS-3 spectrum. The Commission should not use an untested sharing approach in this band if the FCC wants to lead in 5G deployments.

Recognizing the benefits of a mix of spectrum technologies, CCA supports freeing up more spectrum for both licensed and unlicensed uses.¹⁰ Nevertheless, the FCC is making available almost double the amount of unlicensed spectrum as licensed spectrum in these bands. When combined with existing high-band unlicensed spectrum, the Commission will double the current amount of high-band unlicensed spectrum to 14 GHz of spectrum. The FCC should reconsider its sharing proposal for this 600 megahertz of spectrum for licensed opportunities. In addition, C Spire noted that licensing a portion of the 64-71 GHz band will drive greater investment in technology development and deployment that will facilitate greater use of unlicensed portions of the band.¹¹ The Commission therefore should reconsider the division of spectrum between licensed and unlicensed use.

D. Operability

CCA is a long and staunch advocate for interoperability. CCA welcomes operability across the 28 GHz band and across the exclusively licensed portion of the 37 GHz band and 39 GHz band with respect to mobile uses. Nevertheless, if the 37-37.6 MHz band is licensed-by-rule, it should not be included in an operability requirement for the 37.6-40 GHz licensed band. Including the licensed-by-rule band, where sharing requirements have not yet been established, would significantly delay development of standards and equipment and deployment in the traditionally licensed 37.6-40 GHz band. CCA suggests the Commission take a more nuanced approach to operability with respect to fixed technologies and unlicensed spectrum. C Spire urged the Commission to consider how the operability rule might impact device development, considering some fixed technologies only function across a portion of the mmW bands described. Further, C Spire explained that fixed connections are often supported by non-standardized technology and therefore might not easily fit into the proposed operability rules. CCA asked the Commission to fully explore the impact of an operability rule on both mobile and fixed technologies and with respect to unlicensed services in the 37 GHz band.

CCA also highlighted remaining technical concerns related to imposing operability requirements on certain portions of this spectrum. Indeed, the Commission has suggested that it

¹⁰ See Reply Comments of Competitive Carriers Association at 9 and 12, GN Docket No. 14-177, WT Docket No. 10-112 (filed Feb. 26, 2016).

¹¹ See *Ex Parte* Letter of Steve B. Sharkey, Vice President Government Affairs, Technology and Engineering Policy, T-Mobile USA, Inc., to Marlene H. Dortch, Secretary, FCC, GN Docket No. 14-177 at 4 (filed June 30, 2016) (“T-Mobile *Ex Parte*”).

expects to impose an operability requirement across the entire 37-40 GHz band.¹² If the Commission moves forward with this approach, CCA reiterated that operability requirements should not be tied to 37 GHz spectrum while the sharing approach is being finalized. Specifically, including the 37-37.6 GHz spectrum in the operability requirement would delay equipment development and deployment across the entire band.¹³ As noted above, if the Commission were to mandate operability for fixed technologies and across the entire portion of the 37-40 GHz band, this could make certain equipment obsolete and ultimately delay 5G deployment. CCA therefore encouraged the Commission to ensure that any operability requirements for the remaining bands only are applied to mobile technologies.

E. Cybersecurity

CCA likewise expressed concern over the proposed cybersecurity rules. The Commission describes a requirement to “file a statement before deployment that includes certain security-related information, such as a description of participation in standards body of security work, its intended approach to security, and the implications their security by design will have on other parts of the 5G ecosystem.”¹⁴ Although the rule on its face seems to be presented as an information-gathering exercise, the Commission should describe the concerns animating this requirement, including any plans for treating required security filings confidentially and to ensure that no liability could attach to the statements in an enforcement action.

C Spire explained that many competitive carriers simply buy the best network equipment that they can get access to, from the one or two equipment manufacturers willing to create bespoke equipment needed to operate their networks. It is likely small carriers assume security measures are built into the equipment, or that they are relying on assertions by an equipment manufacturer to that effect. Equipment manufacturers in the business of constructing and selling network infrastructure, not carriers, are in the best position to provide security information. If the Commission wishes to gain insight into the security practices of competitive carriers, they should seek that information from the equipment manufacturers. In sum, there are more appropriate avenues to discuss security than mandated disclosures prior to network buildouts.

F. Satellite Operations

Finally, CCA reiterated support for the Commission’s proposal to continue to license satellite operations on a secondary basis.¹⁵ As noted, the amount of mmW licensed spectrum in this proceeding is limited. The FCC should not further constrain exclusive licensed access to this spectrum by complicating the band with satellite interference, particularly in major markets. While CCA supports a shared approach, the Commission should be cautious not to add uncertainty to terrestrial operations¹⁶ by waiting to resolve this issue until a Further Notice of Proposed

¹² Spectrum Frontiers Fact Sheet at 1.

¹³ See T-Mobile *Ex Parte* at 4.

¹⁴ See *Spectrum Frontiers* Fact Sheet at 2.

¹⁵ See *Spectrum Frontiers* Fact Sheet at 2.

¹⁶ See T-Mobile *Ex Parte* at 2.

Rulemaking, despite arguments to the contrary. Such an approach would stymie investment in mmW spectrum and ultimately delay 5G deployment.

Full List of CCA Member Attendees Meeting with Johanna Thomas

Donald L. Herman, Jr. of Herman & Whiteaker on behalf of Adams Telecom. Inc., Central Texas Communications, Inc., E.N.M.R. Telephone Cooperative, Horry Telephone Cooperative, Inc., and Pine Belt Communications, Inc. (via telephone)

Ben Moncrief of C Spire (via telephone)

John Nettles of Pine Belt Communications, Inc. (via telephone)

Jamey Wigley of CTTC (via telephone)

Rebecca Murphy Thompson of CCA (via telephone)

Tim Donovan of CCA

Courtney Neville of CCA

Full List of CCA Member Attendees Meeting with Erin McGrath

Donald L. Herman, Jr. of Herman & Whiteaker on behalf of Adams Telecom. Inc., Central Texas Communications, Inc., E.N.M.R. Telephone Cooperative, Horry Telephone Cooperative, Inc., and Pine Belt Communications, Inc. (via telephone)

Ben Moncrief of C Spire (via telephone)

John Nettles of Pine Belt Communications, Inc. (via telephone)

Jamey Wigley of CTTC (via telephone)

Rebecca Murphy Thompson of CCA (via telephone)

Courtney Neville of CCA

This *ex parte* notification is being filed electronically with your office pursuant to Section 1.1206 of the Commission's Rules. Please do not hesitate to contact me with any questions or concerns.

Sincerely,

/s/ Rebecca Murphy Thompson

Rebecca Murphy Thompson
EVP & General Counsel
Competitive Carriers Association

cc (via email): Johanna Thomas
Erin McGrath